

AO 91 (Rev. 5/85) Criminal Complaint

United States District Court

NORTHERN DISTRICT OF CALIFORNIA

FILED**FEB 28 2005**

UNITED STATES OF AMERICA

V.

SHIN-GUO TSAI
1885 Penwood St.
San Jose, CA 95133

SEALED BY ORDER
OF THE COURT

CRIMINAL COMPLAINT

CASE NUMBER:

05 70140 PVT

RICHARD W. WIEKING
CLERK, U.S. DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE

(Name and Address of Defendant)

I, the undersigned complainant being duly sworn state the following is true and correct to the best of my knowledge and belief. On or about December 25, 2004 in Alameda or Santa Clara county, in the

Northern District of California defendant(s) did, (Track Statutory Language of Offense)

Transport, transmit, or transfer in interstate or foreign commerce any goods, wares, merchandise, securities or money, of the value of \$5,000 or more, knowing the same to have been stolen, converted or taken by fraud

E-filing

in violation of Title 18 United States Code, Section(s) 2314

I further state that I am a(n) SA of the FBI and that this complaint is based on the following

Official Title

facts:

See Attached Affidavit

Continued on the attached sheet and made a part hereof:

☒ Yes☐ No

Approved
As To
Form:

AUSA: H. H. (Shashi) Kewalramani

Name/Signature of Complainant:

Michael D. Leshnowar

Sworn to before me and subscribed in my presence,

February 27, 2005

Date

at

Palo Alto, California

City and State

Patricia V. Trumbull
Chief United States Magistrate Judge

Name & Title of Judicial Officer

Patricia V. Trumbull

Signature of Judicial Officer

**AFFIDAVIT OF SPECIAL AGENT MICHAEL D. LESHNOWER
IN SUPPORT OF CRIMINAL COMPLAINT AND ARREST WARRANT**

I, Michael D. Leshnower, being first duly sworn, hereby depose and state as follows:

I. BACKGROUND AND EXPERIENCE OF AGENT

1. I make this affidavit in support of a criminal complaint and a warrant to arrest SHIN-GUO TSAI ("TSAI"), CDL #B7844607, SS #095-84-5882, A#048009702, a former employee of Volterra Semiconductors, Inc. ("Volterra"), for a violation of Title 18, United States Code, Section 2314 (Interstate Transportation of Stolen Property).

2. I am a Special Agent with the San Francisco Division of the FBI, and I have been so employed for five years. I am currently assigned to a Foreign Counterintelligence squad. Among other things, my responsibilities include investigations of violations of Title 18, United States Code, Sections 1831 (Economic Espionage), 1832 (Theft of Trade Secrets), 2314 (Interstate and Foreign Transportation of Stolen Property), and 1030 (Fraud and Related Activity In Connection with Computers). Through my training and experience, I am familiar with methods used by individuals to steal and transport stolen property in interstate and foreign commerce.

3. Through the course of my investigative experience I have reviewed numerous complaints by victims of trade secret theft and complaints related to the interstate transportation of stolen property. I have also reviewed and executed numerous search warrants related to these types of violations.

4. As part of this investigation I reviewed reports, materials, information provided to me by the victim company Volterra and Volterra's counsel, and I interviewed witnesses from Volterra and the subject. I have personally reviewed e-mail fragments, preliminary results from the forensic examination of TSAI's laptop and desktop computers, and other evidence supporting the information contained in this Affidavit. Because this Affidavit is being submitted for the limited purpose of securing authorization to arrest TSAI and in support of a Criminal Complaint, I have not included each and every fact known to me concerning this investigation. I have set forth only the facts that I believe are essential to establish the necessary foundation to support a

AFFIDAVIT OF SPECIAL AGENT MICHAEL D. LESHNOWER

1 criminal complaint and obtain authorization to arrest TSAI. My training and experience as an
 2 FBI Special Agent, my review of the material, and my discussions with other law enforcement
 3 officers who have been associated with this investigation form the basis of the opinions and
 4 conclusions set forth below.

5 **II. APPLICABLE STATUTE**

6 5. Title 18, United States Code, Section 2314 provides that:

7 Whoever transports, transmits, or transfers in interstate or foreign commerce any
 8 goods, wares, merchandise, securities or money, of the value of \$5,000 or more,
 9 knowing the same to have been stolen, converted or taken by fraud;

10 Shall be fined under this title or imprisoned not more than ten years, or both.

11 **III. FACTS THAT SUPPORT PROBABLE CAUSE**

12 6. An ongoing investigation revealed that TSAI was involved in the downloading,
 13 theft, conversion, and transfer of Volterra's property, namely files containing proprietary
 14 information, to a company in Taiwan. According to David Lidsky, Volterra's Vice President of
 15 Design Engineering, the proprietary information contained in the property related to the design of
 16 high-performance analog and mixed-signal power management semiconductors for the
 17 computing, storage, networking, and consumer markets. A preliminary forensic review of
 18 TSAI's personal laptop computer by FBI personnel revealed that TSAI had stored on his
 19 computer, and subsequently deleted, Volterra's property – data sheets containing proprietary
 20 information related to several of Volterra's 1100 series products. TSAI also admitted that he e-
 21 mailed this Volterra property, containing proprietary information regarding several of Volterra's
 22 1100 series products, from the Northern District of California to his contact at CMSC, Inc. in
 23 Taiwan, in violation of 18 U.S.C. § 2314.

24 **A. Volterra And Its 1100 Series Proprietary Information**

25 7. Lidsky, Volterra's counsel, and Volterra's Website,
 26 <http://www.volterra.com/AboutVolterra>, provided the following information regarding Volterra's
 27 business. Volterra is a Fremont, California-based company that designs, develops and markets
 28 proprietary, high-performance analog and mixed-signal power management semiconductors for

1 the computing, storage, networking, and consumer markets. Volterra's principal products are
2 semiconductors and semiconductor chipsets that transform, regulate, deliver and monitor the
3 power consumed by digital semiconductors. Whereas most conventional power management
4 solutions require a large number of discrete components, Volterra's proprietary power system
5 architecture and mixed-signal design techniques integrate power, analog, and digital circuits onto
6 a single semiconductor, thus eliminating the need for multiple discrete components. Such
7 semiconductors are generally called integrated circuit ("IC") chips as well. Volterra does not
8 actually manufacture its semiconductors, but rather, it designs the semiconductors and then
9 outsources their fabrication to Asia pursuant to manufacturing and confidentiality agreements.
10 Volterra's power management solutions are incorporated into products from leading system
11 designers, including Cisco Systems, Ericsson, Hewlett Packard, Hitachi, IBM, Juniper, NEC, and
12 NVIDIA.

13 8. Volterra's counsel, Lidsky, and Volterra's Information Systems Manager, Raun
14 Nahavitza, stated that Volterra's proprietary information is embodied in the descriptions and
15 specifications of its products that it stores on its servers at its facilities. According to Lidsky, this
16 proprietary information consists of schematics, layouts, design documentation, lab notebooks,
17 chip reviews, and data sheets.

18 9. Lidsky provided the following information regarding Volterra's data sheets that it
19 provides to its customers:

20 a. Volterra provides data sheets to their customers pursuant to non-disclosure
21 agreements entered into between Volterra and its customers.

22 b. The data sheets for each of Volterra's products include information that
23 can be categorized into a chip description and a system description. The chip description
24 provides Volterra's customers information related to the function of the chip, which allows the
25 Volterra customer to properly integrate the Volterra chip design into a system design to power a
26 customer's semiconductor chip. This chip description includes a partial internal proprietary
27 description of the functionalities of the chip.

1 c. The system description in a data sheet primarily provides the customer
2 with information regarding the proprietary performance characteristics of Volterra's chip and the
3 optimal component choice and configuration based upon Volterra's proprietary research.

4 10. According to Lidsky, who stated he consulted with Greg Hildebrand, Volterra's
5 Chief Financial Officer, the data sheets for Volterra's VT1100, VT1101, and VT1102 products
6 constitutes Volterra's property, which contains proprietary information, with a preliminary and
7 conservative value of at least \$100,000. Lidsky stated that the proprietary information contained
8 in the property is potentially worth much more. Lidsky stated that the data sheets contain
9 significant proprietary information belonging to Volterra developed over years of Volterra's
10 Research & Development, which relate to the particular products in the data sheets as well as
11 other Volterra products.

12 **B. TSAI's Employment With Volterra**

13 11. Lidsky and Hildebrand stated that Volterra hired TSAI in July 2002 as a design
14 engineer. According to Lidsky, TSAI's duties included designing analog circuits for
15 semiconductor chips. Lidsky confirmed that on July 15, 2002, prior to beginning his
16 employment with Volterra, TSAI executed an "Employee Proprietary Information and Inventions
17 Agreement." This agreement provides, in relevant part, that during the term of employment,
18 TSAI "will hold in the strictest confidence and will not disclose, use, lecture upon or publish any
19 of the [Volterra's] proprietary information . . . except as such disclosure, use or publication may
20 be required in connection with [the employee's] work for the company . . ."

21 12. In the "Employee Proprietary Information and Inventions Agreement" provided to
22 me by Lidsky, which TSAI executed upon the beginning of his employment with Volterra,
23 "Proprietary Information" is defined to include "trade secrets, inventions, mask works, ideas,
24 processes, formulas, sources and object codes, data, programs, other works of authorship, know-
25 how, improvements, discoveries, developments, designs and techniques."

26 13. Lidsky and Hildebrand stated that TSAI resigned from his position as a design
27 engineer at Volterra on February 15, 2005, by notifying Lidsky. Lidsky stated that TSAI told him
28

1 that TSAI was returning to Taiwan to get married and that TSAI did not have a job in Taiwan,
2 but that TSAI would find one once back in Taiwan.

3 14. Lidsky further stated that after TSAI sent out an e-mail at Volterra announcing his
4 resignation, several engineers at Volterra, including Paul Choi, a design engineer, and Hengky
5 Muljono, a layout designer, approached Lidsky to provide information regarding TSAI's
6 activities over the past several months. Lidsky stated that Choi told him that TSAI had told Choi
7 that TSAI was downloading information from Volterra's network over the course of the past
8 several months and Muljono stated that he saw TSAI downloading information from Volterra's
9 servers in the spring of 2004. As a result of the information provided by Choi and Muljono,
10 Lidsky stated that Volterra retained an outside forensic examination firm and had them conduct a
11 forensic examination of TSAI's Volterra desktop. According to Lidsky, this examination
12 revealed communications between TSAI, Ricky Chow, a former Volterra employee in Volterra's
13 Singapore office, and Johnsea Chen, CMSC, Inc.'s Chairman.

14 15. According to information posted on a Website for the Hsinchu Science Park in
15 Taiwan at <http://eweb.sipa.gov.tw/en/investment/companies/company.jsp?id=A594>, Chen is
16 listed as the Chairman of CMSC, Inc. This same Website lists CMSC, Inc. under the Integrated
17 Circuits category of companies. This and other information gathered from TSAI's Volterra
18 desktop, which is described below in further detail, indicates a relationship between TSAI and
19 CMSC, Inc. According to Lidsky, these e-mails also indicate that CMSC is in a similar business
20 as Volterra. Finally, according to Lidsky and Nahavitz, the forensic examination conducted by
21 Volterra's outside forensics company uncovered TSAI's substantial downloading and "zipping,"
22 or compressing, of files containing Volterra's proprietary information. Lidsky stated that this
23 "zipped" information included information related to semiconductor design projects on which
24 TSAI was not working.

25 **C. TSAI's Relationship With CMSC**

26 16. Though Lidsky stated that TSAI told him TSAI did not have a job in Taiwan, in
27 my interview with Choi, Choi stated that TSAI told him that he did have a job "lined-up" in
28 Taiwan. In this regard, Lidsky provided me with further information regarding Volterra's

forensic review of TSAI's desktop, which shows fragments of e-mails and IM communications between TSAI, Chow, and Johnsea Chen.

17. On February 22, 2005, Lidsky provided the following recovered e-mail from TSAI's Volterra desktop:

Date: Thu, 2 Dec 2004 21:45:41 -0800
 Subject: FW: Same Vision
 To: "'Shin-Guo Tsai'" <sgtsai@sbcglobal.net>
 From: "Shin-Guo Tsai" <sgtsai@sbcglobal.net>

-----Original Message-----
 From: Johnsea Chen [mailto:johnsea@cmcs.com.tw]
 Sent: Wednesday, December 01, 2004 7:46 PM
 To: sgtsai@sbcglobal.net
 Subject: Same Vision
 Importance: High

Hi Shin-Guo,

Nice talking with you this morning, your evening.

I felt so happy to know that both of us have the same vision on how to set up a good business and corporate development strategy for a start up company like us.

As I described, CMSC has its unique development roadmap and unique position along the IC supply chain. During the past 12 months also, CMSC has achieved some key missions which directly proved that CMSC's strategy is on the right track and will lead the company toward the common target we shared this morning.

As a employee and leader of the company, one of my responsibilities is to find and invite good partners who have integrity, vision, technical capability, and endurance to join the team. I also have the responsibility to allocate the resources to each functional department and later distribute the fruitful results fairly in order to boost CMSC's growth.

I totally agree with you that money making is not the final goal of this company. Our goal is to establish a company with deep technical content and with global view and competitiveness in mind. If one can achieve this kind of goal, a good financial reward seems a 'by-product'. In other words, it will just come into your house.

I certainly will have a trip to the U.S. in mid to late December, but before that time, we can start discussing the compensation package for your employment with CMSC, if you like. Usually, the package from a local company in Taiwan will include

- 1) Basic salary (14 months per year)
- 2) Stocks
- 3) Health insurance

Since your will be responsible for a BU, business unit, CMSC could offer you a sign-in bonus for three years.

If you have ideas other than the items listed above, please let me know. Based on these items, we can communicate with each other in order to reach a consensus.

1 BTW, where did you live in Taiwan before or where is your home town in Taiwan? Where are your parents
2 and sib?

3 Best regards,

4 Johnsea

5 18. Lidsky also provided the following e-mail, recovered from TSAI's Volterra's
6 desktop, sent by Chen to TSAI on December 10, 2004:

7 Date: Fri, 10 Dec 2004 13:09:14 +0800
8 Subject: visit on 12/27
9 To: "Shin-Guo Tsai" <sgtsai@sbcglobal.net>
10 From: "Johnsea Chen" <johnsea@cmssc.com.tw>
11 cc: "KZ Chang" <kzchang@cmssc.com.tw>

12 Hi Shin-Guo,

13 Nice talking with you again. I strongly recognized that we almost share the same vision on the future
14 development of both CMSC business/technology and personal career.

15 I will visit you in the evening of 12/27. I will contact you through your cell phone on that day.

16 Best regards,

17 Johnsea

18 19. Lidsky also provided a further e-mail recovered from TSAI's Volterra's desktop,
19 involving Chow, the former Singapore Volterra employee, Chen and TSAI:

20 Date: Thu, 30 Dec 2004 16:20:15 +0800
21 Subject: Hi From Johnsea
22 To: ric_chow@yahoo.com.sg
23 From: "Johnsea Chen - 0003" <johnsea@cmssc.com.tw>
24 Cc: sgtsai@sbcglobal.net

25 Hi Ric,

26 This is Johnsea. I am now in the U.S. but might have a trip to Singapore either on 1/8 or 1/15, depending
27 on your convenience. Please let me know the best schedule as soon as possible.

28 I will stay in the Singapore for one day and night such that we will have enough time to chat with each
other.

I am delighted to have Shin-Guo as a partner to pursue the common goal together. With the same hope, I
wish to go to Singapore and have a long talk with you.

Best regards,

Johnsea

20. According to information provided by Lidsky, Volterra's further review of TSAI's Volterra desktop revealed numerous communications between Chen, other CMSC personnel, and TSAI. The last recovered communication appeared to be as recent as February 4, 2005. Several of the "Subject" lines on e-mails between Chen and TSAI that Lidsky stated Volterra's forensic examination company was able to recover from TSAI's Volterra computer included: "house keeping IC spec meeting minutes on 2/3," dated 02/03; "Fw: Hi Elevation Meeting minutes," dated 01/13; "derivative process," dated 01/12; "Fw: Dell POL spec," date 01/014; "document from Power One," dated 01/04.

21. According to Lidsky, "POL" in this contexts means Point of Load, which relates to power management technology related to semiconductor chips. Lidsky stated that this is the type of technology for which they create their designs. Moreover, Lidsky stated with a "POL spec," a power management chip designer would be able to configure and design a chip to meet a client's needs, or specifications.

22. Lidsky provided me the following "house keeping IC spec meeting minutes on 2/3" e-mail referenced previously and recovered from TSAI's Volterra desktop:

From: "Johnsea Chen" <johnsea@cmssc.com.tw>
 To: "Shin-Guo Tsai" <sgtsai@sbcglobal.net>
 Subject: house keeping IC spec meeting minutes on 2/3
 Date: Fri, 4 Feb 2005 07:27:07 +0800
 Dear SG:

Enclosed is the mail and attachment from Delta group for your reference.

Delta is giving us a direct chance to cut into a power management design as defined by the attached specification. Currently, CMSC analog design II has been [sic] assigned to handle this project with the support from the layout team and technical consultation from Hsinchu.

If you have time, please look into this spec to see if there is anything we should be careful about. Thank you.

How is Ricky? Does he decide the date of visiting Taiwan. I will write him letter too.

* * *

Best Regards,

Johnsea

1 23. According to Lidsky, this e-mail between Chen and TSAI shows that CMSC is
2 attempting to enter, or is already in, Volterra's business of power management design for ICs.

3 **D. TSAI's Exit Interview at Volterra**

4 24. On February 25, 2005, Lidsky and Hildebrand conducted TSAI's exit interview.
5 According to Lidsky and Hildebrand, they reminded TSAI that it was a violation of company
6 policy to download and maintain Volterra's property containing confidential and proprietary
7 information after his departure. Lidsky and Hildebrand stated that TSAI confirmed to them that
8 he did not have this information and that he was aware of Volterra's policies in this regard.

9 **E. TSAI's Subsequent Admissions To The FBI And Volterra**

10 25. After being interviewed by Lidsky and Hildebrand, SA David Sieber, Jr. and I,
11 interviewed TSAI on February 25, 2005, first at Volterra's facilities and later at the Palo Alto
12 Resident Agency. During the course of TSAI's first interview, TSAI first admitted that he was
13 communicating with CMSC, Inc. personnel in Taiwan and that he had lied to Lidsky and
14 Hildebrand when asked whether he currently possessed Volterra's proprietary information on his
15 computers. TSAI also admitted that he had "zipped," or compressed files containing Volterra's
16 proprietary information and e-mailed them to Chen or another contact at CMSC over the course
17 of the previous several months.

18 26. Lidsky stated that after TSAI's initial interview with the FBI, TSAI returned to
19 Volterra and spoke with Lidsky. Lidsky stated that TSAI admitted to lying during his exit
20 interview with Lidsky and Hildebrand and that TSAI first stated that he had sent a single piece of
21 Volterra's property, containing proprietary information, to Chen at CMSC in Taiwan. Later in
22 the conversation, Lidsky stated that TSAI admitted that he had in fact sent two pieces of
23 Volterra's property, containing proprietary information, to Chen at CMSC in Taiwan.

24 27. After his second meeting with Lidsky that day, SA Sieber contacted TSAI and
25 asked him to come to the FBI's offices in Palo Alto. During this second interview, TSAI
26 admitted that in fact he had sent four pieces of Volterra property, containing proprietary
27 information, to his contact at CMSC. During his second interview with the FBI on February 25,
28 2005, TSAI admitted that approximately two months ago, but no longer than six months ago,

1 TSAI e-mailed several of Volterra's confidential data sheets from either Volterra's office in
2 Fremont, California or his home in San Jose, California to his contact at CMSC in Taiwan.
3 TSAI stated that he most likely sent these data sheets using his sgtsai@sbcglobal.net e-mail
4 address, though it was possible that he sent these data sheets using his stsai5@hotmail.com e-
5 mail address. TSAI admitted that he knew that the items he e-mailed to Taiwan were Volterra's
6 property, that the information in the data sheets was Volterra's proprietary information, and that
7 he was not supposed to send this information outside of Volterra.

8 28. When asked to specify the Volterra property that he sent from California to
9 Taiwan, TSAI stated the he sent data sheets related to Volterra's "VT2xx" and "VT11xx" series
10 of products, and TSAI further stated that Lidsky would understand the series of products to
11 which TSAI was referring. According to Lidsky, the "VT2xx" and "VT11xx" series of products
12 are Volterra voltage regulator ICs. Lidsky also stated that the "VT11xx" product series would
13 include, among others, the following Volterra product designs: VT1100, VT1101, and VT1102,
14 and that the information contained in these data sheets was Volterra's proprietary and
15 confidential information. Lidsky further stated that TSAI did not and was not working on these
16 particular Volterra products and that the information on these data sheets would not be relevant
17 to his work on other Volterra projects. As set forth previously, Lidsky in consultation with
18 Volterra's CFO, stated that the preliminarily calculated value of the proprietary information
19 contained in these data sheets was conservatively worth at least \$100,000, and could be worth
20 much more.

21 **F. Forensic Review of TSAI's Volterra Desktop and Personal Laptop**

22 29. After his exit interview with Volterra and his initial interview with myself and SA
23 Sieber, TSAI consented to provide and have the FBI search his personal laptop and several
24 personal desktop computer hard drives. An ongoing forensic review of TSAI's personal laptop
25 by the FBI has preliminarily indicated that in January 2005, TSAI deleted several data sheets.
26 These data sheets included those for the VT1100, VT1101, and VT1102 Volterra products. My
27 review of the recovered data sheets that TSAI had deleted showed that the data sheets were
28 marked with Volterra's "Confidential" stamp as well as a notation not to make copies of the data


1 sheets. The preliminary forensic review indicating that these data sheets were deleted in January
 2 2005, supports TSAI's statement that he e-mailed them to his contact in Taiwan approximately
 3 two months ago. The forensic review of TSAI's computers is ongoing.

4 **G. Summary of Probable Cause**


5 30. Based on my review of the facts that (1) TSAI caused Volterra's property to be
 6 moved in foreign commerce from the Northern District of California to Taiwan, (2) Lidsky
 7 confirmed that the information in the property was preliminarily and conservatively worth at least
 8 \$100,000, (3) TSAI acknowledged that he knew the Volterra data sheets were Volterra's property
 9 and contained Volterra's proprietary information that was not to be disseminated when he e-
 10 mailed them, and (4) the e-mailing of the property caused Volterra to permanently lose
 11 ownership of the property, there is probable cause to believe that TSAI violated 18, United States
 12 Code, Section 2314.

13 **IV. REQUEST TO SEAL THIS AFFIDAVIT**

14 31. I respectfully requests that this affidavit be sealed until further notice by the Court.
 15 Disclosure of the affidavit in support of a complaint and arrest warrant at this time would
 16 seriously jeopardize the ongoing investigation, as such disclosure may provide an opportunity to
 17 destroy evidence, change patterns of behavior, notify potential confederates, or allow potential
 18 confederates to flee or continue flight from prosecution. Additionally, according to David
 19 Lidsky, this Affidavit contains Volterra's proprietary and confidential information.

20
 21 
 22 MICHAEL D. LESHNOWER
 23 Special Agent
 24 Federal Bureau of Investigation

25 SUBSCRIBED to and SWORN to before me
 this 27th day of February 2005

26 
 27 PATRICIA V. TRUMBULL
 28 Chief United States Magistrate Judge

AFFIDAVIT OF SPECIAL AGENT MICHAEL D. LESHNOWER